

## **Bed Bugs – Coming to a School Near You! Are you ready?**

Bed bugs have made a big comeback in the US in recent years. As the pest populations boom and students, staff and faculty come to school from diverse places, bed bugs can, and **will** hitchhike into your school. It is only a matter of time. For school administrators and facilities managers, bed bugs arriving at the school is a recipe for big headaches – from bad publicity, expensive contracted services to litigation. Why are bed bugs such a challenge and how can you be proactive?

Bed bugs are uniquely different from most indoor pests. First, their behavior and biology make them extremely difficult to prevent and eliminate with the usual combination of IPM tools. Secondly, few things cause such strong emotional reactions as do the suspicion or discovery of bed bugs. Bed bugs elicit “fear and loathing” along with a strong dose of stigma – even though hygiene, sanitation or “dirt” have nothing to do with bed bug infestations. When bed bugs arrive in school, accusations fly with demands for immediate action, even if ineffective or inappropriate. Don't let this happen to you!

The formula for success in dealing with bed bugs is to prepare for the inevitable, and educate everyone.

Four-step approach for success in bed bug management and damage control:

1. Learn about basic bed bug biology and management options.
2. Develop policies and procedures at the school district level.
3. Anticipate bed bugs' appearance and prepare your response.
4. Engage all stakeholders (it takes a village to eliminate bed bugs!)

## **Part One**

### **Basic Bed Bug Information**

Bed bugs are brought into buildings on peoples' belongings. Students, staff, faculty – anyone – can bring hitchhiking bed bugs in. The key is to educate everyone as much as possible to stop bed bugs at their source - 99% of the time this is the home. Penn State University and many other places have good information on basic lifecycles of bed bugs.

### **Potential Signs of Bed Bugs**

*Bites* on students reported by school nurses or teachers

Because peoples' reactions to bed bug bites vary from no reaction to large welts, there is not way to positively identify if a bite was caused by bed bugs. However, bites can initiate inquiries and educational opportunities. Was the student outside during mosquito activity? Are there pets in the home? Are others in the home being bitten? Penn State brochures on “Is Something Biting Me” as well as bed bug fact sheets can be made available to concerned individuals. BedBugCentral.com has good pictures of the appearance of bed bug bites.

### *Bed bug sitings*

Many small arthropods are easily mistaken for bed bugs. Get a positive ID first. Because it has been so long since bed bugs have been a problem in the US, even some pest control operators have misidentified bed bugs. Cornell University has a good brochure on “mistaken identity” insects and your local county Penn State Cooperative Extension Office can help verify bed bug and other insect ID.

### **Make bed bugs easier to detect and/or more difficult to establish**

Bed bugs hide during the day in the tiniest of cracks and crevices. They favor rough surfaces near places where humans park themselves for long periods of time. While clutter does not favor them per se, it makes inspection and possible treatments difficult. Take these factors into consideration in your school.

### **Finding bed bugs**

Generally speaking, schools are not a likely habitat for serious bed bug infestations. Bed bugs are most likely to be found on peoples' belongings. Try to find out where that person might have spent most of their time in the school (office?, individual classroom?), or where their belongings might have been kept (locker? desk?). Incipient infestations may consist of only a few individuals in the entire school. So how do you find them? There are several monitoring devices available that utilize CO<sub>2</sub> to attract the bed bugs at night when they are looking to feed. Locate these in the suspect area for the recommended time to verify the presence or absence of bugs. Canine scent detection is another option – which, when a quality provider is engaged, works well. However, there are currently quality control issues with many of these. For an excellent overview of monitoring options, see Bed Bugs 101 on [bedbugcentral.com](http://bedbugcentral.com).

### **Stopping bed bugs**

Actions to stop the spread of bed bugs are similar to steps taken in public health quarantines to avoid contamination with disease vectors. Avoid bringing in potentially infested items, such as used furniture, or “donations” from homes. Monitor areas likely to be first infested – lounges, break rooms, anywhere people might sleep. Try to identify the sources of bed bugs found in schools (most likely homes) and help people understand how to eliminate them, while establishing barriers to the bugs' spread in both directions. This will require cooperation between the parents/guardians and the school personnel.

**Heat/Cold** - Bed bugs on belongings can be killed and/or isolated in a number of ways. Heat above 140 degrees will kill bed bugs *and their eggs*. Soft items (clothes, backpacks, ball caps, shoes etc.) can be thrown in a dryer on “high” for 20 minutes. Hard items (books, leather shoes, belts) can be treated with heat in “hot boxes”. Steam heat can be used on larger items and areas (furniture, walls, floor/wall junctions). Some items may be able to be frozen to kill bed bugs. Technical information exists on all these protocols and you will have to consider what might work best in your school. Increasingly, companies are producing new ways to deliver heat or cold treatments for bed bugs.

**Isolation** – Keep potentially infested items isolated. Zip lock bags, totes, commercial covers, encasements, and physical barriers on furniture are ways of keeping bug-free-items on hand and separated from potentially bug-infested environments.

**Pesticides** – Resist demands that may arise to “spray the school” for bed bugs, even if this comes from a contracted pest control service. Because of the isolated nature of any potential infestation, bed bugs' habits, their resistance to most commonly used pesticides and the constant likelihood of re-infestation by new hitchhikers, pesticides do not solve the problem. Any pesticide use should be carefully considered as a part of your holistic approach to the problem, carefully selected based on efficacy and the sensitive environment, and justified by the strategic control point it may provide in your program.

**Use this information to help establish your own policies and procedures for bed bugs.**

## Part Two

### Stakeholder communications

1. Engage **pest control personnel** (contractor or in-house)
  - Discuss bed bug issues with those responsible for pest control.
  - If in-house, encourage them to seek independent training on IPM for bed bugs.
  - If contracting, make sure the company can provide a quality IPM approach.
  - Low-bid providers are seldom the providers of quality service.
  - Assure they are up to speed on all legal requirements for pest management in schools as well as appropriate and legal tools for bed bugs
  - Monthly spraying is not an effective IPM approach to any pest, least of all bed bugs.
2. Engage the **school community**
  - Educate & communicate with everyone in your school
    - Administration
    - Maintenance & custodial
    - Environmental Health and Safety
    - Faculty, Staff and Students
  - Let them know
    - the school is being proactive
    - who to contact with questions
    - there is no “shame” in finding a bed bug on your possessions
    - what the policies and procedures will be for bed bug “discoveries”
    - what they can do to help
    - early reporting of problems is essential
    - avoid taking direct action against bed bugs themselves
    - do not publicly single out individual students for action when bugs are found
3. Engage **parents and guardians**
  - Let them know, *in advance* of any problem, that:
    - you are being proactive about the possibility of bed bugs
    - you are a source of accurate information and sound advice on bed bugs
    - they have a role to play in keeping the school bed bug-free
    - anyone can get bed bugs (no stigma)
    - if bed bugs are found in their home, please advise the contact person at school

### Avoiding litigation due to bed bugs

- Have a plan in place for the eventuality of bed bugs and *document* actions taken
- *Document* your education effort with the school community, pest management and parents.
- Ensure that any pesticides that may be used in the school
  - comply with Pest Control Act and Act 35 & 36 (IPM and Pesticide Notification laws)
  - are applied by a licensed applicator
  - are legal to be used for bed bugs
  - are legal for the specific site and location (e.g. indoors, schools, food surfaces)
  - be up to speed on the PDA Hypersensitivity Registry
- Consult with the school district's legal counsel.